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D. Remarks

Reconsideration and allowance in view of the amendments made and comments which follow are respectfully requested.

Claims 1-22 are pending in this application. Claim 1 is being amended. New claims 23-26 are being added. Claims 1-26 are now pending.

In the Office Action, claims 1-22 were rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over MacKinnon (Radiology, 1997) in view of Somorjai (Magnetic Resonance in Medicine, 1995). The Examiner stated that in the paper MacKinnon discusses fine-needle biopsy specimens of benign breast lesions distinguished from invasive cancer ex vivo with proton MR spectroscopy to determine whether invasive breast cancer can be distinguished from benign lesions with proton magnetic resonance (MR) spectroscopy ex vivo on the basis of altered cellular chemistry. The Examiner stated that the MacKinnon paper concluded that proton MR spectroscopy of fine-needle biopsy specimens provides objective diagnostic information that complements findings of conventional preoperative investigations of breast lesions. The Examiner stated that relative to the instant claims is the paragraph bridging the column 2-3 of page 664. The Examiner stated that the last sentence of the paragraph cites the Somorjai reference and teaches that the multivariate techniques of the reference are "likely to improve sensitivity and specificity" of the analysis.

The Examiner stated that in the paper Somorjai presents computerized consensus diagnosis as a classification strategy for the robust analysis of ¹H MR spectra of thyroid neoplasms. The

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Examiner stated that they developed and applied a new classification strategy called computerized consensus diagnosis (CCD) to provide robust, reliable classification of biomedical data. The Examiner stated that the strategy involves the cross-validated training of several classifier of diverse conceptual and methodological origin on the same data, and appropriately combining their outcomes using Linear Discriminant Analysis as independent classifiers on two spectral regions, and chose the median of the six classification outcomes as the consensus.

The Examiner stated that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the multivariate analysis methodology of Somorjai into the MacKinnon analysis of breast tissues because of the statement by MacKinnon directing one of the Somorjai multivariate method as likely to provide improved results and the teaching of improved analysis results by Somorjai.

The Somorjai reference cited by the Examiner reports on earlier work of co-inventors herein, and applicants are familiar with this work.

The Somorjai reference does not disclose clause (c) of claim 1 which recites repeating the cross-validation of step (b) a plurality of times. Nowhere does Somorjai disclose repeating any cross-validation step.

Somorjai also fails to disclose clause (d) of claim 1, which recites obtaining a weighted average of the linear discriminant analysis (LDA) coefficients (obtained from step (c)) to obtain final classifier spectra.

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For these reasons, Somorjai fails to disclose claim 1. For at least the same reasons, Somorjai also fails to disclose claim 9, 15 and 19.

Even if the MacKinnon and Somorjai references were combined as proposed by the Examiner, claim 1 is patentable at least because Somorjai fails to disclose the features discussed above.

In view of the foregoing, applicant urges that independent claims 1, 9, 15 and 19 are patentable over the prior art cited. New claims 23, 24, 25 and 26 are being added. These new claims track claims 1, 9, 15 and 19, respectively, but are not limited to breast tissue or biopsies of tissue. Applicant believes that these claims are patentable as well, at least for the same reasons given above in connection with claim 1.

In compliance with his duty of disclosure under 37 C.F.R. §1.56, applicant directs the Examiner's attention to the following references which are listed on the accompanying form PTO-1449 (Exhibit 1). These references are listed in the present application at the end of the specification before the claims. Copies of references numbered 3, 4, 5, 7, 8, 9, 14, 15, 16, 17, 19, 20, 21, 22, 24 and 25 are enclosed, and the remainder numbered 1, 2, 6, 10, 11, 12, 13, 18 and 23 are still being located.

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A copy of a International Search Report, issued April 2, 2001 in
connection with corresponding PCT International Application No.
CA00/01238, is attached. Also attached is a copy of the PCT
Written Opinion dated August 9, 2001.

If a telephone interview would be of assistance in advancing
prosecution of the subject application, applicants'
undersigned attorneys invites the Examiner to telephone them at the
number provided below.

Other than the \$55 one-month extension fee, \$180 fee for filing the
Information Disclosure Statement, and the additional claims fee of
\$196 (a check totaling \$431.00 for which is enclosed), no
additional fee is deemed necessary in connection with the filing of
this Response. However, if any fee is required, authorization is
hereby given to charge the amount of any such fee to Deposit
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